Model Disclosure Elements for Actuarial Valuation Reports on Public Retirement Systems in California

As part of its effort to influence and improve actuarial practice with respect to public retirement systems in California, the California Actuarial Advisory Panel has adopted a set of model disclosure elements for actuarial valuation reports of public retirement systems in California.

These model disclosure elements do not represent a minimum standard of practice but rather a level of disclosure that actuaries should strive towards with respect to their reports on the actuarial valuations of public retirement systems in the State of California. It is hoped that these model disclosure elements will gradually be adopted by the majority of pension and OPEB actuaries practicing in the public sector in California.

Basic Disclosures: The basic disclosure elements shown below represent a modest extension on current actuarial practice in the public sector in California. Much of the information below can be found in current actuarial valuation reports.

1. Normal Cost

   A. General. The normal cost should be disclosed in sufficient detail so that the user can understand how this element of the recommended contribution is determined and how it is to be paid.

   B. Form. The Normal Cost would usually be determined as either a percent of pay or a dollar amount[1]. If the normal cost is not determined as a dollar amount, the estimated dollar amount of the contributions should also be disclosed.

   C. Timing. The disclosure should indicate the assumed timing of the normal cost within the contribution year: beginning of year, during they year (e.g., by pay period), end of year, etc.

   D. Funding source. For contributory plans the disclosure should indicate the total normal cost, the portion funded by member contributions, and the net employer normal cost.

2. Actuarial Accrued Liability (AAL)
3. Market Value of Assets (MVA) and Actuarial Value of Assets (AVA)
4. Unfunded Actuarial Accrued Liability (UAAL)

   On both an AVA basis and a MVA basis

5. Current Contribution Requirement

[1] Where there are active members, the normal cost will usually be expressed as a percentage of pay. However, in some circumstances it may be appropriate to determine the normal cost on some other basis such as a level dollar amount. Where there are no active members, the normal cost would normally be determined as $0.

As with the Normal Cost, this should be disclosed in sufficient detail so that the user can understand how the recommended contribution is determined and how it is to be paid. The current contribution would usually be determined as either a percent of pay or a dollar amount[2]. If the current contribution is not determined as a dollar amount, the estimated dollar amount of the contributions should also be disclosed.

Also as with the Normal Cost, the current contribution requirement should include information as to the timing and funding sources of the contributions.

6. Funded Ratios on both an AVA and MVA basis (AVA/AAL, MVA/AAL)
7. Asset Smoothing Ratio (AVA / MVA) before and after any MVA corridor
8. Volatility Ratios

   Asset Volatility Ratio: MVA/Payroll – This ratio provides an indication of the potential contribution volatility for any given level of investment volatility. A plan with an Asset Volatility Ratio of 10 would have double the level of contribution volatility of a plan with an Asset Volatility Ratio of 5.[3] This is a current measure since it is based on the current level of assets.

   Liability Volatility Ratio: AAL/Payroll –This ratio provides an indication of the longer-term potential for contribution volatility for any given level of investment volatility.[4] In addition, this ratio provides an indication of the potential contribution volatility due to liability experience (gains and losses) and liability remeasurements (assumption changes).

9. Reconciliation of changes in UAAL

   A schedule of changes in UAAL since the previous actuarial valuation date should include:

   a. The UAAL as of the previous valuation date
   b. Expected changes in UAAL, including Normal Cost, interest and contributions[5]
   c. Unexpected changes in UAAL, including gains and loses[6], assumption changes, method changes and plan amendments
   d. The resulting UAAL as of the current valuation date

[2] Where there are active members, the current contribution requirement will usually be expressed as a percentage of pay. However, in some circumstances it may be appropriate to determine the current contribution requirement on some other basis such as a fixed dollar amount. Where there are no active members, the current contribution requirement would normally be determined as a fixed dollar amount.

[3] If a plan has an asset volatility ratio of 10, a 10% loss on assets translates to 100% of payroll. This will have a substantial impact on required contributions regardless of the amortization or other smoothing mechanisms. However, for a plan has an asset volatility ratio of 5, a 10% loss on assets translates to 50% of payroll and would only have half the impact on contributions of a plan with an asset volatility ratio of 10.

[4] This is because the assets should track the liabilities over an extended period of time. If a plan is 50% funded on a market value basis, the liability volatility ratio would be double the asset volatility ratio and the plan sponsor should expect contribution volatility to increase over time as the plan becomes better funded.

[5] Contributions may be shown as either actual or expected, with consistent treatment of the disclosure of contribution gains or losses later in this schedule

[6] While a complete reconciliation of gains/loses by source is not necessarily required, major sources of gain/loss should be separately identified, including investment related gain/loss.

10. UAAL Amortization Schedule

    The UAAL amortization schedule should include the current UAAL amount(s), the remaining amortization period(s) and the current UAAL amortization payment(s). As applicable (for example, when the total UAAL is amortized in separate amounts based on the source of the UAAL) the schedule should include the original UAAL amortization amounts, and the dates and sources of such amounts

Basis for Valuation: These disclosures are intended to give the user of the report essential information as to the basis for measurement of plan costs and liabilities.

11. Disclose the assumptions used in the actuarial valuation along with the rationale and process for establishing those assumptions.
12. Disclose the principal actuarial funding policies and related methodologies used in the actuarial valuation along with the rationale and process for establishing those policies. Such funding policies should include:
    a. The actuarial cost method used to allocate the present value of projected benefits to years of service for active members, including any variations in the "entry age" method such as "replacement life" or "funding to decrement".
    b. The asset smoothing method used to determine the AVA, including the smoothing period and method as well as any constraints on the AVA such as an "MVA corridor".
    c. The UAAL amortization policy including the structure (single UAAL layer vs. multiple UAAL layers), method (level dollar vs. level percent of pay, fixed (closed) vs. rolling (open) amortization periods) and period(s) used for determining the amortization payments.
    d. Any other methodologies used to determine the actuarial funding policy contribution amounts, including, for example, any phase-in of the effect of assumption changes or any limitations on the amount that contributions can change in a given year.
13. Disclose the basis for determining the actual contributions made to the plan if different from that determined under the actuarial funding policies.

Enhanced Disclosures: These disclosures go beyond the results of the current valuation and so may require additional work on the part of the actuary. Because of the cost implications, these disclosures may be adopted more slowly than the other disclosure elements above. Nevertheless, we believe that these disclosures will generally add value to the report and encourage their adoption as the norm for public plan actuarial work where appropriate.

14. Contribution Requirement on an MVA basis

    Disclose the current contribution requirement with the AVA set equal to the MVA.

15. Projections

    Future Benefits and Contributions, Future Funded Status[7]

Risk Disclosures: These disclosures are intended to give the user of the report additional information and understanding of the risks associated with the funding of the pension plan. As with the Enhanced Disclosures, these disclosures may require additional work on the part of the actuary and may be adopted more slowly than other disclosures. These disclosures could include but are not limited to:

16. A "sensitivity analysis" showing the impact on current valuation results of changes in key assumptions and methodologies.
17. A "deterministic stress test" projection of future results under appropriately chosen scenarios showing the effect of future actual experience different from that assumed in the valuation.
18. A "stochastic or probabilistic" analysis on the impact of statistical variation in key experience elements including the actual future investment returns.

Historical Disclosures: These disclosures show the history of contribution practices and actuarial assumption and funding policy decisions. We encourage plans to begin maintaining a record of these results as well as presentation of as many years of past results are available.

19. Contribution History (10 years or more)

    Actuarially determined amount (based on estimated or actual payroll)

    Funding policy amount, if different (based on estimated or actual payroll)

    Actual contribution amount

20. Funding Policy History (10 years or more)

    Changes in asset smoothing method

    Changes in UAAL amortization policy

    Changes in other funding policies (incl. cost method)

    For each: date, effect and rationale

21. Changes in Economic Assumptions (10 years or more)

    Includes price inflation, wage inflation, and investment earnings

    For each, date, effect and rationale

[7] A projection of the funded status is more appropriate in some circumstances than others. It is particularly useful when the employer is not contributing the actuarially determined amount. It would also be appropriate when the combination of asset smoothing, and amortization policies is such that the funded status is not expected to increase when all assumptions are met.

It is not anticipated that all of these disclosures would be included in every actuarial communication but rather would be included in key communications such as the regular (often annual) actuarial valuation report for funding purposes.